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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/803,625	03/18/2004	Alessandro Gallitognotta	59183-8059.US02	5807

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Perkins Coie LLP  
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EXAMINER

ZIMMERMAN, GLENN

ART UNIT PAPER NUMBER

2879

DATE MAILED: 01/06/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

10/803,625

Applicant(s)

GALLITOGNOTTA ET AL.

Examiner

Glenn Zimmerman

Art Unit

2879

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 28 October 2004.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-7, 15 and 17-28 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 1-7, 15 and 17-23 is/are allowed.
- 6) ☒ Claim(s) 24-28 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 12 November 2002 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)  | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

## **DETAILED ACTION**

### ***Response to Amendment***

Amendment, filed on October 28, 2004, has been entered and acknowledged by the examiner.

### ***Priority***

An application in which the benefits of an earlier application are desired must contain a specific reference to the prior application(s) in the first sentence of the specification or in an application data sheet (37 CFR 1.78(a)(2) and (a)(5)). The specific reference to any prior nonprovisional application must include the relationship (i.e., continuation, divisional, or continuation-in-part) between the applications except when the reference is to a prior application of a CPA assigned the same application number.

### ***Claim Rejections - 35 USC § 102***

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claim 24 is rejected under 35 U.S.C. 102(b) as being anticipated by Yarmovsky U.S. Patent 3,292,026.

Regarding claim 24, Yarmovsky disclose a cathode, the cathode formed by a cylindrical hollow part (Fig. 4 ref. 33) closed at a first end and open at a second end (Fig 4, 5 and 7), comprising a getter layer (ref. 22) that partially covers an outer surface portion of the cylindrical hollow part.

### ***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 25 and 26 are rejected under 35 U.S.C. 103(a) as being unpatentable over Yarmovsky U.S. Patent 3,292,026 in view of Stutsman U.S. Patent 2,668,254.

Yarmovsky teaches all the limitations of claim 25, but fails to teach wherein the cylindrical hollow part is made essentially of metal. Stutsman in the analogous art teaches wherein the cylindrical hollow part is made essentially of metal (ref. 13 nickel cathode cylinder). Additionally, Stutsman teaches incorporation of such a cylindrical hollow part made essentially of metal to improve welding items to the cathode and metals operate well as cathodes (col. 2 lines 39-41 and 29-30).

Consequently it would have been obvious to a person having ordinary skill in the art at the time the invention was made to use a metal nickel cathode in the cylindrical

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hollow cathode of Yarmovsky, since such a modification would improve welding items to the cathode and metals operate well as cathodes as taught by Stutsman.

Regarding claim 26, Stutsman discloses wherein the metal includes material chosen from among the group consisting of nickel (ref. 13 nickel cathode cylinder), molybdenum, tantalum and niobium. This claim is rejected for the same reasons found in claim 25.

Claim 27 is rejected under 35 U.S.C. 103(a) as being unpatentable over Yarmovsky U.S. Patent 3,292,026 in view of Hirschhorn et al. U.S. Patent 2,890,367.

Regarding claim 27, Yarmovsky teaches all the limitations of claim 27, but fail to teach a getter formed of a metal selected among the group consisting of: titanium, vanadium, yttrium, zirconium niobium, hafnium and tantalum. Hirschhorn et al. in the analogous art teaches a getter formed of a metal selected among the group consisting of: titanium, vanadium, yttrium, zirconium niobium, hafnium and tantalum (col. 1 lines 20-23). Additionally, Hirschhorn et al. teaches incorporation of such a getter material to improve the removal of residual quantities of undesirable active gases (col. 1 lines 15-19).

Consequently it would have been obvious to a person having ordinary skill in the art at the time the invention was made to use a getter formed of a metal selected among the group consisting of: titanium, vanadium, yttrium, zirconium niobium, hafnium and tantalum in the getter of Yarmovsky, since such a modification would improve the removal of residual quantities of undesirable active gases as taught by Hirschhorn et al.

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Claim 28 is rejected under 35 U.S.C. 103(a) as being unpatentable over Yarmovsky U.S. Patent 3,292,026 in view of Malvern UK Patent Application Publication 2091481A.

Regarding claim 28, Yarmovsky teach all the limitations of claim 28, but fails to teach the getter is an alloy that includes zirconium combined with aluminum. Malvern in the analogous art teaches the getter is an alloy that includes zirconium combined with aluminum (abstract). Additionally, Malvern teaches incorporation of such a getter material to improve absorbing of active gases and provide a faster gettering rate (page 4 lines 30-35).

Consequently it would have been obvious to a person having ordinary skill in the art at the time the invention was made to use the getter is an alloy that includes zirconium combined with aluminum in the getter of Yarmovsky, since such a modification would improve absorbing of active gases and provide a faster gettering rate as taught by Malvern.

### ***Allowable Subject Matter***

Claims 1-7, 15 and 17-23 are allowed.

Regarding claim 1, the following is an examiner's statement of reasons for allowance: The prior art of record neither shows nor suggests a cathode including the combination of all the limitations as set forth in claim 1, and specifically wherein an outer an inner surface portion of the cylindrical hollow part includes a layer of getter material along with the perfected foreign priority could not be found elsewhere in prior art.

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Regarding claims 2-7 and 15, claims 2-7 and 15 are allowed for the reasons given in claim 1, because of their dependency status on claim 1.

Regarding claim 17, the following is an examiner's statement of reasons for allowance: The prior art of record neither shows nor suggests a cathode including the combination of all the limitations as set forth in claim 17, and specifically wherein a portion of the surface near the first end of the cathode is free of the layer of getter material along with the perfected foreign priority could not be found elsewhere in prior art.

Regarding claims 18-23, claims 18-23 are allowed for the reasons given in claim 17, because of their dependency status on claim 17.

### ***Response to Arguments***

Applicant's arguments with respect to claims 24-28 have been considered but are moot in view of the new ground(s) of rejection.

### ***Conclusion***

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

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A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.



Any inquiry concerning this communication or earlier communications from the examiner should be directed to Glenn Zimmerman whose telephone number is (571) 272-2466. The examiner can normally be reached on M-W 8-5.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Nimesh D Patel can be reached on (571) 272-2457. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Glenn Zimmerman



Vip Patel  
Primary Examiner  
AU 2879